

Site ID	14CTB - 301		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/29	Day of Year	302
Field Crew	JCB MEM AME COW		
Platform	MAKO	Location	ASIS / CNWR VA
Arrival Time (EDT)	14:35	Departure Time (EDT)	
Latitude	N38.01757	Longitude	W075.27513
Water Depth (m)			
Handheld GPS used	765	GPS Waypoint	095
YSI	765	Camera	AW102

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling: Mn Fiber	
GPS Receiver Used	A	Start Time	
GPS Session ID	A095	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (ka/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes
YSI taken in pond as deep as marci's middle finger is long (6cm?) next to site

Photos
2152-2155 N → E → S-W 2156 - East to pond where YSI was taken

<b>Site ID</b>	14CTB - 303		
<b>USGS Field Activity Number (FAN)</b>	2014-322-FA (14CTB02)		
<b>Date</b>	10/29	<b>Day of Year</b>	302
<b>Field Crew</b>	JCB MEM	AME CTW	
<b>Platform</b>	MAKO	<b>Location</b>	ASIS MD
<b>Arrival Time (EDT)</b>	15:46	<b>Departure Time (EDT)</b>	
<b>Latitude</b>	N 38.04560	<b>Longitude</b>	W 075.25782
<b>Water Depth (m)</b>		<b>GPS Waypoint</b>	098
<b>Handheld GPS used</b>	765	<b>Camera</b>	AIN100
<b>YSI</b>	pu +		

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
<b>GPS Receiver Used</b>	A	<b>Start Time</b>	
<b>GPS Session ID</b>	A098	<b>Stop Time</b>	
<b>Occupation Time (min)</b>	5 min	<b>Total Volume</b>	

<b>Surface/Grab</b>	<b>Water Quality Parameters</b>
<b>Vegetation/Sediment Type</b>	Water Type (estuary, marsh, standing, marsh backfill)
<b>Pentrometer (marsh sites only)</b>	Temperature (°C)
<b>Shear Strength (kg/cm²) (marsh sites only)</b>	Barometric Pressure (mm Hg)
<b>Forams (preserved, x2)</b>	Dissolved Oxygen (DO) (%)
<b>Bulk Density/LOI</b>	DO (mg/L)
<b>Grain Size</b>	Specific Conductance (mS/cm)
<b>Stable Isotopes/Metals</b>	Salinity
<b>Distance from GPS</b>	pH (-)
<b>Azimuth from GPS</b>	ORP (mV)

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>	<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>
<b>Vegetation Type</b>	<b>Barrel Length (cm)</b>
<b>Pentrometer</b>	<b>ITGODS (bottom of weld = top of barrel) (cm)</b>
<b>Shear Strength (kg/cm²)</b>	<b>Recovered Core Length (cm)</b>
<b>Barrel Length (cm)</b>	<b>Core Catcher Used?</b>
<b>In-the-Ground Inside Depth to Surface (ITGIDS) (cm)</b>	<b>Distance from GPS</b>
<b>In-the-Ground Outside Depth to Surface (ITGODS) (cm)</b>	<b>Azimuth from GPS</b>
<b>Compaction (cm)</b>	
<b>Recovered Core Length (cm)</b>	
<b>Distance from GPS</b>	
<b>Azimuth from GPS</b>	

<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>	<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>
<b>Number of Sections</b>	<b>Recovered Depth (cm)</b>
<b>Total Core Length (cm)</b>	<b>Distance from GPS</b>
<b>Distance from GPS</b>	<b>Azimuth from GPS</b>
<b>Azimuth from GPS</b>	

<b>Notes</b>
YSI in "pond" ~ 5m E 095 from site (standing swimming water) torque set @ 325 reading 73.2

<b>Photos</b>
2157 - 2160 N → E → S → W from site



Site ID	14CTB - 304		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/29	Day of Year	302
Field Crew	JCB MEM BTW AME		
Platform	MAKO	Location	ASIS MD
Arrival Time (EDT)	16:21	Departure Time (EDT)	
Latitude	N38 0476 8	Longitude	W075 23818
Water Depth (m)			
Handheld GPS used	76 S	GPS Waypoint	099
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn-Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A099	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes
<p>~ 3m N 350 from site to SET monument</p> <p>spartina + patchy bare sediment</p> <p>MEM holding antenna rod on plate - could not push spike in + rod is broken measurement is</p>

Photos
<p>unchanged.</p> <p>2162 - old marsh core hole from March?</p> <p>sed surface ~ 5cm deep</p> <p>2163 - 2166 N → E → S → W from site</p> <p>target shear vane 300 reading 14.7</p>

Site ID	14CTB - 305 - replicate 380		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/28	Day of Year	301
Field Crew	JCB + CJW		
Platform	MAKE	Location	ASIS
Arrival Time (EDT)	14:13	Departure Time (EDT)	
Latitude	N38.08303	Longitude	W075.21003
Water Depth (m)	5-10cm	GPS Waypoint	077
Handheld GPS used	076	Camera	AW100
YSI	pen +		

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	RCCA	Start Time	
GPS Session ID	A077	Stop Time	
Occupation Time (min)	5min	Total Volume	

<b>Surface/Grab</b>	<b>Water Quality Parameters</b>
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (ka/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>	<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>	<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

<b>Notes</b>
<p>14CTB-305 replicate 380</p> <p>very shallow boat access to 306 + 305</p> <p>rising tide wind 11-20 out of SSW is pushing water <u>in</u></p>

<b>Photos</b>
<p>replicate W270 1.25m from DGPS</p> <p>AW100 2121 from boat/trail inlet to site</p> <p>-2124 N→E→S→W</p>



<b>Site ID</b>		14CTB - 306	
<b>USGS Field Activity Number (FAN)</b>		2014-322-FA (14CTB02)	
<b>Date</b>	10/28	<b>Day of Year</b>	301
<b>Field Crew</b>	JCB + CJN		
<b>Platform</b>	MARCO	<b>Location</b>	ASIS
<b>Arrival Time (EDT)</b>	13:32	<b>Departure Time (EDT)</b>	
<b>Latitude</b>	N38 08802	<b>Longitude</b>	W075.22087
<b>Water Depth (m)</b>	<1cm	<b>GPS Waypoint</b>	076
<b>Handheld GPS used</b>	JCB 76 S	<b>Camera</b>	AW100
<b>YSI</b>	pro +		

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
<b>GPS Receiver Used</b>	Rec A	<b>Start Time</b>	
<b>GPS Session ID</b>	A076	<b>Stop Time</b>	
<b>Occupation Time (min)</b>	5 min	<b>Total Volume</b>	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
<b>Vegetation/Sediment Type</b>	spartina	<b>Water Type (estuary, marsh, standing, marsh backfill)</b>	marsh - standing
<b>Pentrometer (marsh sites only)</b>	—	<b>Temperature (°C)</b>	20.3
<b>Shear Strength (kg/cm²) (marsh sites only)</b>	—	<b>Barometric Pressure (mm Hg)</b>	764.5
<b>Forams (preserved, x2)</b>	—	<b>Dissolved Oxygen (DO) (%)</b>	74.5
<b>Bulk Density/LOI</b>	—	<b>DO (mg/L)</b>	5.49
<b>Grain Size</b>	—	<b>Specific Conductance (mS/cm)</b>	51.34
<b>Stable Isotopes/Metals</b>	—	<b>Salinity</b>	33.79
<b>Distance from GPS</b>	25 cm	<b>pH (-)</b>	7.85
<b>Azimuth from GPS</b>	6080	<b>ORP (mV)</b>	47.3
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
<b>Vegetation Type</b>		<b>Barrel Length (cm)</b>	
<b>Pentrometer</b>		<b>ITGODS (bottom of weld = top of barrel) (cm)</b>	
<b>Shear Strength (kg/cm²)</b>		<b>Recovered Core Length (cm)</b>	
<b>Barrel Length (cm)</b>		<b>Core Catcher Used?</b>	
<b>In-the-Ground Inside Depth to Surface (ITGIDS) (cm)</b>		<b>Distance from GPS</b>	
<b>In-the-Ground Outside Depth to Surface (ITGODS) (cm)</b>		<b>Azimuth from GPS</b>	
<b>Compaction (cm)</b>			
<b>Recovered Core Length (cm)</b>			
<b>Distance from GPS</b>			
<b>Azimuth from GPS</b>			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
<b>Number of Sections</b>		<b>Recovered Depth (cm)</b>	
<b>Total Core Length (cm)</b>		<b>Distance from GPS</b>	
<b>Distance from GPS</b>		<b>Azimuth from GPS</b>	
<b>Azimuth from GPS</b>			
<b>Notes</b>			
<p>forgot hand pen/shear vane spartina marsh</p>			
<b>Photos</b>			
<p>2117-2120 N → E → S → W from site</p>			

Site ID	14CTB - 307		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/28	Day of Year	301
Field Crew	JCB CJW		
Platform	MAKO	Location	ASIS
Arrival Time (EDT)	15:04	Departure Time (EDT)	
Latitude	N 38.10368	Longitude	W 075.20865
Water Depth (m)	25 cm		
Handheld GPS used	765	GPS Waypoint	079
YSI	Pro +	Camera	AW100

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A079	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

<b>Notes</b>			

  

<b>Photos</b>			
2125-2128 N → E → S → W from boat			



<b>Site ID</b>	14CTB - 308		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/28	Day of Year	301
Field Crew	JCB CJW		
Platform	Mako	Location	ASIS
Arrival Time (EDT)	15:27	Departure Time (EDT)	15:47
Latitude	N38.11201	Longitude	W075.19901
Water Depth (m)	<5 cm		
Handheld GPS used	76 S	GPS Waypoint	080
YSI	PO +	Camera	AW102

  

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn-Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A080	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

<b>Surface/Grab</b>	<b>Water Quality Parameters</b>
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>	<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGDS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>	<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

<b>Notes</b>
<p>elevated sandy "berm" still identifiable;</p> <p>* DGPS A081; mostly vegetated</p> <p>lots of wrack @ this shoreline</p> <p>* DGPS in sand auger hole; 0 cm from site!</p>

  

<b>Photos</b>
<p>AW2129-2132 N → E → S → W from boat</p> <p>2133 jellyfish</p>

Site ID	14CTB - 309		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worcester Co. MD
Arrival Time (EDT)	11:33	Departure Time (EDT)	
Latitude	N38.11246	Longitude	N075.18793
Water Depth (m)			
Handheld GPS used	JCB 76S	GPS Waypoint	026
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling: Mn Fiber	
GPS Receiver Used	Rec-A	Start Time	
GPS Session ID	A026	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes
<p>overwash fan - sand + sparse veg  sand auger plugged + organic's. 44 cm plus  peaty sample from auger tip (~44-45 cm?)</p>

Photos
<p>DSLR 104 site  105-108 N → E → S → W from site  109-111 trench</p>



Site ID		14CTB - 310	
USGS Field Activity Number (FAN)		2014-322-FA (14CTB02)	
Date	10/21	Day of Year	294
Field Crew		JCB + CJW	
Platform	OSV	Location	BSIS, Wachester Cr, MD
Arrival Time (EDT)	12:16 EDT	Departure Time (EDT)	1:13 PM
Latitude	N38.11284	Longitude	W075.19112
Water Depth (m)	55 cm standing	GPS Waypoint	002
Handheld GPS used	JCB 765	Camera	JCB A630 128-131
YSI			
<b>Sample Type/Sample</b>		<b>X, Measure, Time</b>	
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue	REC A	
GPS Session ID		ADD 2	
Occupation Time (min)		5 min	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	SAND/muck/spartina	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	90 cm	pH (-)	
Azimuth from GPS	SSE 150	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	18 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	21 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	1.00 m
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	S 160
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			
<b>Notes</b>			
<p>poor recovery of sand auger in mucky sed  penetrated root mat  back-barrier marsh WT x 4</p>			
<b>Photos</b>			
128-131 N → E → S → W from site			

Site ID	14CTB - 381		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21/14	Day of Year	294
Field Crew	JCB + CJW		
Platform	OSY	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	12:16	Departure Time (EDT)	12:39
Latitude	N 38.11284	Longitude	W 075.19112
Water Depth (m)	55 cm standing		
Handheld GPS used	JCB 765	GPS Waypoint	002
YSI		Camera	JCB A630

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling- Mn Fiber</b>	
GPS Receiver Used	Blue RECA	Start Time	
GPS Session ID	A002	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type		Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	90 cm	pH (-)	
Azimuth from GPS	SSE 150	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	241
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	13 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	22 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	14 m
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	S 160
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

  

<b>Notes</b>			
14CTB-381 Replicate 14CTB 310 mosquitoes are <u>BAD</u> 			

  

<b>Photos</b>			



Site ID	14CTB - 311		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB, CTW		
Platform	OSV	Location	ASIS, Wechester CO, MD
Arrival Time (EDT)	11:34 EDT	Departure Time (EDT)	12:00
Latitude	N 38.11365	Longitude	W 075.19323
Water Depth (m)	55 cm standing		
Handheld GPS used	JCB 765	GPS Waypoint	001
YSI		Camera	JCB CANON A630 120-127

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling- Mn Fiber	
GPS Receiver Used	Blue	Start Time	
GPS Session ID	A001	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGDS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGDS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
<p>Poor sand auger recovery of saturated sandy marsh sediments</p> <p>Estuarine/back-barrier marsh @ WTx4</p>

  

Photos
<p>122 - looking ~W @ Antenna</p> <p>123-126 N → E → S → W from site</p> <p>127 marsh veg.</p>

Site ID	14CTB - 312		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB + CJN		
Platform	OSV	Location	ASIS, Worchester Co, MD
Arrival Time (EDT)	14:45	Departure Time (EDT)	14:55
Latitude	N38.13009	Longitude	W075.18523
Water Depth (m)	~5 cm standing	GPS Waypoint	006
Handheld GPS used	JCB 765	Camera	JCB A630
YSI			147-152

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue Rec A	Start Time	
GPS Session ID	A006	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (ka/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
edge of pond/inlet backbarrier estuarine marsh spartina (?) veg

  

Photos
147-150 N → E → S → W
151 trees
152 tidal inlet (NW)



Site ID	14CTB - 313		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB + CJW		
Platform	OSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	15:57	Departure Time (EDT)	
Latitude	N 28.14066	Longitude	W 075.18993
Water Depth (m)	1-2 cm standing		
Handheld GPS used	JCB 765	GPS Waypoint	008
YSI		Camera	JCB A630 157-162

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue REC A	Start Time	
GPS Session ID	A008	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	spartina	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	75 cm	pH (-)	
Azimuth from GPS	N 340	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	
Shear Strength (kg/cm²)		Recovered Core Length (cm)	
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			
<b>Notes</b>			
<p>SET ~ 2m N 020 from DGPS  back-barrier/estuarine spartina marsh  "cliffed" shoreline ~ 25-35 cm deep.</p>			
<b>Photos</b>			
<p>157-160 N → E → S → W from site  161 ~ NE @ SET towards site 325  162 ~ E Along shoreline</p>			

Site ID	14CTB - 314		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10-21-14	Day of Year	094
Field Crew	mm AE		
Platform	mako	Location	ASIS
Arrival Time (EDT)	16:00	Departure Time (EDT)	16:35
Latitude	N 38.15150	Longitude	W 75.18825
Water Depth (m)	NA		
Handheld GPS used	625tc	GPS Waypoint	128
YSI	—	Camera	AW 100

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	smg 2X-2	Start Time	
GPS Session ID	B601	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	?	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	3.75	Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)	NA	Barometric Pressure (mm Hg)	
Forams (preserved, x2)	✓	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	✓	DO (mg/L)	
Grain Size	✓	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	✓	Salinity	
Distance from GPS	50 cm	pH (-)	
Azimuth from GPS	NE	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	58 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	14 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	75 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	E
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

  

<b>Notes</b>			
No shear vane Ht of GPS antenna = 81.8 cm			

  

<b>Photos</b>			
2066 - 2072			



Site ID		14CTB - 315	
USGS Field Activity Number (FAN)		2014-322-FA (14CTB02)	
Date	10/21	Day of Year	294
Field Crew	JCB + CJW		
Platform	OSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	16:52	Departure Time (EDT)	17:06
Latitude	N 38.15314	Longitude	W 075.17879
Water Depth (m)	~10 cm standing		
Handheld GPS used	JCB 765	GPS Waypoint	009
YSI		Camera	JCB AL30 163-169

Sample Type/Sample		X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning			Radium Sampling: Mn Fiber	
GPS Receiver Used	Blue	REC A	Start Time	
GPS Session ID		A009	Stop Time	
Occupation Time (min)		5 min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	spartina	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	1 m	pH (-)	
Azimuth from GPS	N 020	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	15 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	15 cm
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	1.0
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	N 030
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

Notes			
<p>Poor recovery of muddy marsh sed w/ sand auger back barrier spartina sp? marsh adj to tidal inlet</p>			

Photos			
<p>163-166 N → E → S → W from site (sun glare in 166) 167-169 ~ W → N along tidal inlet</p>			

Site ID	14CTB - 316		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB + CSW		
Platform	OSV	Location	ASIS, Worcester CO, MD
Arrival Time (EDT)	17:16	Departure Time (EDT)	17:25
Latitude	N38.15232	Longitude	W075.17610
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	010
YSI		Camera	JCB A630 170

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	RECA	Start Time	
GPS Session ID	A010	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	B?	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	11	Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)	11	Barometric Pressure (mm Hg)	
Forams (preserved, x2)	11	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	11	DO (mg/L)	
Grain Size	11	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	11	Salinity	
Distance from GPS	85 cm	pH (-)	
Azimuth from GPS	N350	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	50 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	13 cm
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			
<b>Notes</b>			
<p>tall marsh grass (spartina?) + roots thick roots poor penetration w/ sand auger</p>			
<b>Photos</b>			
<p>No Vegetation</p>			



Site ID	14CTB - 317		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB + CJW		
Platform	OSV	Location	ASIS, Worcester co, MD
Arrival Time (EDT)	17:34	Departure Time (EDT)	17:45
Latitude	N 38.15184	Longitude	W 075.17361
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	011
YSI		Camera	JCB A630 171-174

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue R10A	Start Time	
GPS Session ID	A011	Stop Time	
Occupation Time (min)	5min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

<b>Notes</b>			
<p>SANDY olw deposit @ toe of fan          sparse veg + sand burrs          may have penetrated ~ org rich layer at bottom          No trench today, running out of light</p>			
<b>Photos</b>			
<p>171-174 N → E → S → W from site</p>			

GPS time off

Rep w/ 3825

<b>Site ID</b>		14CTB - 320 S	
USGS Field Activity Number (FAN)		2014-322-FA (14CTB02)	
Date	Oct 26 2014	Day of Year	299
Field Crew	AME GW		
Platform	DSV	Location	
Arrival Time (EDT)	941	Departure Time (EDT)	
Latitude	38.20021	Longitude	-75.1011
Water Depth (m)	5 cm		
Handheld GPS used	SANIPROD 76	GPS Waypoint	
YSI	yes	Camera	watuproof 112
<b>Sample Type/Sample</b>		<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>
<b>DGPS Positioning</b>			<b>Radium Sampling: Mn Fiber</b>
GPS Receiver Used	B	Start Time	
GPS Session ID	B111	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	Juncus	Water Type (estuary, marsh, standing, marsh backfill)	marsh
Pentrometer (marsh sites only)	0.75	Temperature (°C)	13.9
Shear Strength (kg/cm²) (marsh sites only)	✓	Barometric Pressure (mm Hg)	758.1
Forams (preserved, x2)	✓	Dissolved Oxygen (DO) (%)	43.0
Bulk Density/LOI	✓	DO (mg/L)	4.16
Grain Size	✓	Specific Conductance (mS/cm)	30.92
Stable Isotopes/Metals	✓	Salinity	23.38
Distance from GPS	85 cm	pH (-)	16.0
Azimuth from GPS	SOUTH EAST	ORP (mV)	53.3
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	
Shear Strength (kg/cm²)		Recovered Core Length (cm)	
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			
<b>Notes</b>			
could not get gps pole into ground without metal plate. Dish to surface of marsh 2.05m.			
GPS time off by 1 hour, we are using current time			
<b>Photos</b>			
# 2083 - 2086 N → E → S → W			

111?

Jumping from 35-50%

PSU



Site ID	
USGS Field Activity Number (FAN)	
Date	Day of Year
Field Crew	Platform
Arrival Time (EDT)	Location
Latitude	Departure Time (EDT)
Water Depth (m)	Longitude
Handheld GPS used	GPS Waypoint
YSI	Camera
Sample Type/Sample X, Measure, Time Sample Type/Sample X, Measure, Time	
DGPS Positioning	Radium Sampling: Mn Fiber
GPS Reciever Used	Start Time
GPS Session ID	Stop Time
Occupation Time (min)	Total Volume
Surface/Grab Water Quality Parameters	
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature ( $^{\circ}\text{C}$ )
Shear Strength ( $\text{kg}/\text{cm}^2$ ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)
Marsh Push Core: 4" Polycarbonate Barrel Sand Gouge Core: AMS Sand Loose Sediment Probe	
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld $\approx$ top of barrel) (cm)
Shear Strength ( $\text{kg}/\text{cm}^2$ )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	
Marsh Auger Core: Eijkelpamp Peat Sampler Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	
Notes	
Photos	

Rep 001/3205

Site ID	14CTB - 3825	3215
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)	
Date	10/26/14	Day of Year 299
Field Crew	CJW AME	
Platform	OSU	Location
Arrival Time (EDT)	10:51	Departure Time (EDT) 11:10
Latitude	38.21217	Longitude -75.15325
Water Depth (m)	1 cm	
Handheld GPS used	SANFORD 76	GPS Waypoint 113
YSI	NO	Camera waterproof

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling: Mn Fiber	
GPS Receiver Used	B	Start Time	
GPS Session ID	B113	Stop Time	
Occupation Time (min)	5min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	SPARTINA	Water Type (estuary, marsh, standing, marsh backfill)	MARSH
Pentrometer (marsh sites only)	0.75	Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)	✓	Barometric Pressure (mm Hg)	
Forams (preserved, x2)	✓	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	✓	DO (mg/L)	
Grain Size	✓	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	✓	Salinity	
Distance from GPS	1.17m	pH (-)	
Azimuth from GPS	NE	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	50
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	19 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	17.5 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	67 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	240° NW
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

Notes
-------

could not get GPS fully in sed. 2.02m from ground surface to antenna.

Photos
2007-2015 (horse, local N→E→S→W), Cathryn's first sand auger!



Site ID	14CTB - 3235		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26/14	Day of Year	299
Field Crew	CJL, A ME		
Platform	OSV	Location	
Arrival Time (EDT)	12:00	Departure Time (EDT)	
Latitude	38.21170	Longitude	-75.15125
Water Depth (m)	8		
Handheld GPS used	SANFORD 10	GPS Waypoint	115
YSI	NO	Camera	waterproof

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	B	Start Time	
GPS Session ID	B 115	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
ground surface to antenna (GPS) - 2.04m

  

Photos
2100 - 2103 N → E → S → W

Site ID	14CTB - 324		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26/14	Day of Year	299
Field Crew	GWA AME		
Platform	DSU	Location	back dune area
Arrival Time (EDT)	1134	Departure Time (EDT)	11:52
Latitude	38.21095	Longitude	-75.15015
Water Depth (m)	0		
Handheld GPS used	SANDED 70	GPS Waypoint	114
YSI	150	Camera	waterproof

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling: Mn Fiber	
GPS Receiver Used	B114	Start Time	
GPS Session ID	5	Stop Time	
Occupation Time (min)		Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
ground surface to antenna - 2.02m

  

Photos
20916 - 299 N → E → S → W



Site ID	14CTB - 303 (replicate of 324)		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26/14	Day of Year	
Field Crew	CW AMC		
Platform	05V	Location	back dune overwash
Arrival Time (EDT)	1134	Departure Time (EDT)	1152
Latitude	38.21095	Longitude	-75.15015
Water Depth (m)	0	GPS Waypoint	114
Handheld GPS used	SANFORD 70	Camera	waterproof
YSI	NO		

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling: Mn Fiber	
GPS Receiver Used	B	Start Time	
GPS Session ID	B114	Stop Time	
Occupation Time (min)	5	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld ≈ top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes			
ground surface to antenna (GPS) → 2.02m			

Photos	
2096 - 2099	N → E → S → W

<b>Site ID</b>		14CTB - 325	
<b>USGS Field Activity Number (FAN)</b>		2014-322-FA (14CTB02)	
<b>Date</b>	10/21	<b>Day of Year</b>	294
<b>Field Crew</b>	JCB + CJW		
<b>Platform</b>	OSV	<b>Location</b>	ASIS, Worchester CO, MD
<b>Arrival Time (EDT)</b>	15:27	<b>Departure Time (EDT)</b>	15:40
<b>Latitude</b>	N 38.14366	<b>Longitude</b>	W 075.18906
<b>Water Depth (m)</b>	< 5 cm standing		
<b>Handheld GPS used</b>	JCB 765	<b>GPS Waypoint</b>	JCB A630
<b>YSI</b>		<b>Camera</b>	153-156

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
<b>GPS Receiver Used</b>	Blue Rec A	<b>Start Time</b>	
<b>GPS Session ID</b>	A007	<b>Stop Time</b>	
<b>Occupation Time (min)</b>	5 min	<b>Total Volume</b>	

<b>Surface/Grab</b>	<b>Water Quality Parameters</b>
<b>Vegetation/Sediment Type</b>	Water Type (estuary, marsh, standing, marsh backfill)
<b>Pentrometer (marsh sites only)</b>	Temperature (°C)
<b>Shear Strength (kg/cm²) (marsh sites only)</b>	Barometric Pressure (mm Hg)
<b>Forams (preserved, x2)</b>	Dissolved Oxygen (DO) (%)
<b>Bulk Density/LOI</b>	DO (mg/L)
<b>Grain Size</b>	Specific Conductance (mS/cm)
<b>Stable Isotopes/Metals</b>	Salinity
<b>Distance from GPS</b>	pH (-)
<b>Azimuth from GPS</b>	ORP (mV)

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>	<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>
<b>Vegetation Type</b>	Barrel Length (cm)
<b>Pentrometer</b>	ITGODS (bottom of weld = top of barrel) (cm)
<b>Shear Strength (kg/cm²)</b>	Recovered Core Length (cm)
<b>Barrel Length (cm)</b>	Core Catcher Used?
<b>In-the-Ground Inside Depth to Surface (ITGIDS) (cm)</b>	Distance from GPS
<b>In-the-Ground Outside Depth to Surface (ITGODS) (cm)</b>	Azimuth from GPS
<b>Compaction (cm)</b>	
<b>Recovered Core Length (cm)</b>	
<b>Distance from GPS</b>	
<b>Azimuth from GPS</b>	

<b>Marsh Auger Core: Eijkamp Peat Sampler</b>	<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>
<b>Number of Sections</b>	Recovered Depth (cm)
<b>Total Core Length (cm)</b>	Distance from GPS
<b>Distance from GPS</b>	Azimuth from GPS
<b>Azimuth from GPS</b>	

<b>Notes</b>
@ SET MARK ~ 3.5 m ESE 130 from DGPS mark back barrier / estuarine marsh (spartina) adj to forested / shrub scrub

<b>Photos</b>
153-156 N → E → S → W from site



Site ID	14CTB - 326		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worcester Co., MD
Arrival Time (EDT)	09:54	Departure Time (EDT)	
Latitude	N38.10990	Longitude	W075.18871
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	024
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue RICA	Start Time	
GPS Session ID	A024	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

Bare sand in depression on o/v fan between vegetated areas.  
punched thru black sand + peat into underlying sand.

Photos

DSLR 93-96 N → E → S → W from site  
79-93 site + trench photos.



Site ID	14CTB - 327		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/23	Day of Year	296
Field Crew	JCB + MEM		
Platform	OSV	Location	A315 Worcester Co MD
Arrival Time (EDT)	12:58	Departure Time (EDT)	
Latitude	N38.12067	Longitude	W075.18467
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	017
YSI		Camera	

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A017	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld ≈ top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
<p>vegetated on deposit recovered org-rich(er) layer in sand auger</p>

  

Photos
<p>A630 200-203 N → E → S → W from site 204 trench site 205 veg.</p>



Site ID	14CTB - 328		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	DSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	17:04	Departure Time (EDT)	
Latitude	N 38.11801	Longitude	W 075.18618
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	040
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	KecA	Start Time	
GPS Session ID	A040	Stop Time	
Occupation Time (min)	5 min	Total Volume	

<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	SAND + veg	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)	1	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	1	DO (mg/L)	
Grain Size	1	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	1	Salinity	
Distance from GPS	40 cm	pH (-)	
Azimuth from GPS	W 270	ORP (mV)	

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	7 cm
Shear Strength (kg/cm²)		Recovered Core Length (cm)	40 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

**Notes**

SAND, wet, with thin veg (grassy + shrub)  
 SAND Auger sand → black sand @ 23 cm  
 peaty organics 26-30 cm into underlying sand

**Photos**

DSLR 177 side photo  
 178-181 N → E → S → W from site  
 182-183 French

Site ID	14CTB - 372		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/29	Day of Year	302
Field Crew	JCB MEM AME COW		
Platform	MAKO	Location	Vaughan WMA, MD
Arrival Time (EDT)	12:49	Departure Time (EDT)	
Latitude	N38.05749	Longitude	W075.35247
Water Depth (m)		GPS Waypoint	091
Handheld GPS used	765	Camera	AW100
YSI			

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A091	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld ≈ top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

\* Shear vane setting 310. number flashing after 1 rotation  
60.6

Photos

2147-2150 N → E → S → W from site  
2151 ~ NW along "cliffed" marsh edge + oyster bed.



Site ID	14CTB - 373		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/29	Day of Year	302
Field Crew	JCB AME	CJW	
Platform	MAKO	Location	Vaughn WMA, MD
Arrival Time (EDT)	12:21	Departure Time (EDT)	
Latitude	N38.06885	Longitude	W075.36588
Water Depth (m)	5-10 cm		
Handheld GPS used	76 S	GPS Waypoint	090
YSI	Pro +	Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling- Mn Fiber</b>	
GPS Receiver Used	Blue Rec A	Start Time	
GPS Session ID	A090	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

#### Marsh Push Core: 4" Polycarbonate Barrel

Vegetation Type	
Pentrometer	
Shear Strength (kg/cm²)	
Barrel Length (cm)	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

#### Sand Gouge Core: AMS Sand/Loose Sediment Probe

Barrel Length (cm)	
ITGODS (bottom of weld = top of barrel) (cm)	
Recovered Core Length (cm)	
Core Catcher Used?	
Distance from GPS	
Azimuth from GPS	

#### Marsh Auger Core: Eijkelpamp Peat Sampler

Number of Sections	
Total Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

#### Shovel (Dig) Core: AMS Sharpshooter Shovel

Recovered Depth (cm)	
Distance from GPS	
Azimuth from GPS	

#### Notes

black muck, stinky!  
 spartina marsh  
 sample site approx. 15 feet from canal edge

#### Photos

0146 from boat ~sw to site

Site ID	14CTB - 393		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/22	Day of Year	295
Field Crew	JCB MEM AME CJW		
Platform	OSV	Location	ASIS Worcester CO MD
Arrival Time (EDT)	11:17	Departure Time (EDT)	11:45
Latitude	N 38.24456	Longitude	W 075.13504
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	013
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Reciever Used	Rec-A	Start Time	
GPS Session ID	A013	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	dune / spartina	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	50 cm	pH (-)	
Azimuth from GPS	SW 210	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGDS (bottom of weld = top of barrel) (cm)	Full
Shear Strength (kg/cm²)		Recovered Core Length (cm)	41 cm
Barrel Length (cm)		Core Catcher Used?	No
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	15 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	N 000
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			
<b>Notes</b>			
<p>No peat / sand contact in trench  o/w fan is heavily vegetated.</p>			
<b>Photos</b>			
<p>DSLR 0016 → trench pix  A630 184-187 N → E → S → W from site  188 site photo  189 vegetation</p>			



Site ID	14CTB - 394
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)
Date	Oct 26/14
Field Crew	QJW - AME
Platform	OSU
Arrival Time (EDT)	131
Latitude	38.2450
Water Depth (m)	10 cm
Handheld GPS used	SANFORD 710
YSI	4PS
	Location
	Departure Time (EDT)
	Longitude
	GPS Waypoint
	Camera

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	B	Start Time	
GPS Session ID	(B116)	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGDS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGDS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

GPS Pole @ boundary  
too much H<sub>2</sub>O for Shear Strength + pentrometer

Photos

2104-2107 N → E → S → W

Site ID	14CTB - 395		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS
Arrival Time (EDT)	12:50	Departure Time (EDT)	
Latitude	N 38.24599	Longitude	W 075.13490
Water Depth (m)		GPS Waypoint	059
Handheld GPS used	765	Camera	DSLR
YSI			

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>			
GPS Receiver Used	A	Radium Sampling: Mn Fiber	
GPS Session ID	A059	Start Time	
Occupation Time (min)	5 min	Stop Time	
		Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes
<p>toe of overwash fan extends ~ all the way to bay immediately adj to juncus @ edge of woody scrub.</p> <p>prominent sand berm at bayside shoreline + tidal inlet adj to site</p>

Photos
<p>320-330 site photos + directionals, see log book</p> <p>331-333 trench 395A</p> <p>334-336 trench 395</p>



Site ID	14CTB - 424 replicate 469		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	05 V	Location	ASIS, Worcester Co. MD
Arrival Time (EDT)	17:30	Departure Time (EDT)	17:50
Latitude	N38.11793	Longitude	W075.18655
Water Depth (m)			
Handheld GPS used	JOB 76S	GPS Waypoint	041
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A041	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

bar sand near edge of overwash toe  
 DAPS A042/042 immediately into ~~the~~ adjacent marsh  
 SAND Auger organic layer 23.5-26.5 cm

Photos

DSLR 184 to site  
 185-188 N → E → S → W from site  
 189 marsh A042  
 190-191 trench.

Site ID	14CTB - 425		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	16:32	Departure Time (EDT)	
Latitude	N 38.11777	Longitude	W 075.18599
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	039
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A039	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

#### Notes

overwash fan SAND + sparse veg/grasses  
 in "depression," thicker veg adjacent S+N  
 SAND Auger olive-brown organic-rich horizon 32~36 cm  
 marsh surface?

#### Photos

DSLR 171 site photo  
 172-176 N → NE → E → S → W from site  
 172 is up transect towards 434



Site ID	14CTB - 427		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	15:52	Departure Time (EDT)	
Latitude	N 38 1633	Longitude	W 075. 18618
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	038
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A038	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gauge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

Sandy w/ sparse veg.  
 Sand auger from surface no organics 45cm  
 #2 40cm 49-89 cm depth  
 organics (roots + brown) but no true peat from 26-29cm.

Photos

DSLR 163-164 site photos  
 165-168 N → E → S → W from site  
 168 is along o/w toe

Site ID	14CTB - 428		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSU	Location	ASIS Worcester Co MD
Arrival Time (EDT)	15:03	Departure Time (EDT)	15:45
Latitude	N38.11538	Longitude	W075.18672
Water Depth (m)			
Handheld GPS used	JCB 76 S	GPS Waypoint	035
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Roc A	Start Time	
GPS Session ID	A035	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

SAND + sparse veg, incl. scrub/shrub.  
 DGPS/GPS A036/035 off toe in veg. - sandy soil. not marshy  
 SAND Auger 0-44 cm no organics  
 #2 58cm - 95cm (37cm core length) no organics

Photos

DSLR 155-156 site pix 157-159 see log book  
 160-162 trench





Site ID	14CTB-429		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/23	Day of Year	296
Field Crew	JCB + MEM		
Platform	DSV	Location	ASIS, Warrick Co MD
Arrival Time (EDT)	12:12	Departure Time (EDT)	
Latitude	N 38.12077	Longitude	W 075.18491
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	015
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	RECA	Start Time	
GPS Session ID	A015	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

#### Notes

@ toe of overwash fan.  
Sandy, with sparse veg - panicum (?) + golden rod,  
DGPS site A015 = off edge in marsh  
org contact penetrated in sand auger.

#### Photos

A630 195-198 N → E → S → W from site  
199 ~ W to toe of fan from site

Site ID	14CTB - 430		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/23	Day of Year	296
Field Crew	JCB + MEM		
Platform	OSU	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	13:23	Departure Time (EDT)	
Latitude	N38.12053	Longitude	W075.18427
Water Depth (m)		GPS Waypoint	018
Handheld GPS used	JCB 765	Camera	
YSI			

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A018	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

#### Notes

ow fan, sparse veg's adj. to more vegetated "dune"  
~~no trench -> sand auger~~  
 2 x Sand auger 0-48 cm from surface  
 42-74 cm from water table.

#### Photos

A630 206-209 N → E → S → W from site



Site ID	14CTB - 431 Replicate 470		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/23	Day of Year	296
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worcester Co MD
Arrival Time (EDT)	13:51	Departure Time (EDT)	14:25
Latitude	N38.12040	Longitude	W075.18386
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	019
YSI		Camera	

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	REC A	Start Time	
GPS Session ID	A019	Stop Time	
Occupation Time (min)	5min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

<b>Notes</b>			
dune / sparse veg (panicum?) near crest of dune / "hummock" hard pack @ ~ 32 cm could not punch through with sand auger			

  

<b>Photos</b>			
A630 210-213 N → E → S → W from site 214-215 E to site from tx. tried to capture elevation change			

Site ID	14CTB - 432		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/23	Day of Year	296
Field Crew	JCB + MEM		
Platform	DSV	Location	ASIS Worcester Co MD
Arrival Time (EDT)	15:08	Departure Time (EDT)	
Latitude	N38.11947	Longitude	W075.18435
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	020
YSI		Camera	A630, DSLR

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue Rec A	Start Time	
GPS Session ID	A020	Stop Time	
Occupation Time (min)	5min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	25 cm	pH (-)	
Azimuth from GPS	SSE 160	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	248
Pentrometer		ITGODS (bottom of weld ≈ top of barrel) (cm)	Full
Shear Strength (kg/cm²)		Recovered Core Length (cm)	36.5 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	15 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	SE 150
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

  

<b>Notes</b>			
<p>bore sand in "depression" between vegetated dunes.          Surface sand auger - 50% recovery to wet sand          2nd sand auger from wet sand line 36.5 cm          (depth 41-77.5 cm) plugged in organics.</p>			
<b>Photos</b>			
<p>A630 216-219 N → E → S → W from site          220 ENE from site GPR track follows depression</p>			



Site ID	14CTB - 433		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	11/23	Day of Year	296
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS Worcester Co MD
Arrival Time (EDT)	15:41	Departure Time (EDT)	
Latitude	N 38.11859	Longitude	W 075.18491
Water Depth (m)		GPS Waypoint	021
Handheld GPS used	JCB 765	Camera	AG30, DSLR
YSI			

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A021	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	35 cm	pH (-)	
Azimuth from GPS	S 185	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld ≈ top of barrel) (cm)	full
Shear Strength (kg/cm²)		Recovered Core Length (cm)	51 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	25 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	S 190
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			
<b>Notes</b>			
<p>Bar sand in old "depression" between vegetated dunes  Sand auger plugged in black organic layer.</p>			
<b>Photos</b>			
<p>AG30 221-224 N → E → S → W from site  224 is along GPR track</p>			

Site ID	14CTB - 434		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/23	Day of Year	296
Field Crew	JCB, MEM		
Platform	OSV	Location	ASIS Worcester Co, MD
Arrival Time (EDT)	16:36	Departure Time (EDT)	
Latitude	N38.11769	Longitude	W075.18536
Water Depth (m)			
Handheld GPS used	JCB 76S	GPS Waypoint	023
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Ric A	Start Time	
GPS Session ID	A023	Stop Time	
Occupation Time (min)	5min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

#### Notes

target on crest of vegetated dune. moved to BE adjacent in "depression" - last time encountered hard pack + no organics from dune crest. Better chance of penetrating organics here. Sand auger failed: 2x < 10cm recovery. Sand auger from wet sand contact @ 35cm recovered organics

#### Photos

225-228 N→E→W→S from site  
229 ~S to target site



Site ID	14CTB - 436		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worasky Co, MD
Arrival Time (EDT)	13:38	Departure Time (EDT)	14:15
Latitude	N 38.11282	Longitude	W 075.18712
Water Depth (m)			
Handheld GPS used	JCB 76 S	GPS Waypoint	034
YSI		Camera	DSLR

  

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	16cc A	Start Time	
GPS Session ID	A034	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

<b>Surface/Grab</b>	<b>Water Quality Parameters</b>
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>	<b>Sand Gauge Core: AMS Sand/Loose Sediment Probe</b>
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

<b>Marsh Auger Core: Eijkelpamp Reat Sampler</b>	<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

<b>Notes</b>
<p>O/w fan - wet sand w/ sparse veg  SAND Auger recovered black org at base  plug in top is rooted sand.</p>

  

<b>Photos</b>
<p>148 site pix  149-152 N → E → S → W from site  153-154 trench</p>

Site ID	14CTB - 437		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	DSV	Location	ASIS, Worcester Co MD
Arrival Time (EDT)	13:12	Departure Time (EDT)	
Latitude	N38.11292	Longitude	W075.18764
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	032
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A032	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

target on side of grassy "knoll"  
 sample from bare overwash adjacent to this,  
 DGPS/GPS A033/033 from crest of vegetated knoll  
 SAND Auger - no organics to 26.5 cm  
 2nd try from 25 cm recovered org + underlying sand (25-59 cm)

Photos

DSLR 139-140 site pix  
 141-144 N → E → S → W from site  
 145 site pix  
 146-147 trench



Site ID	14CTB - 438		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	ASV	Location	ASIS, Worcester C, MD
Arrival Time (EDT)	12:08	Departure Time (EDT)	
Latitude	N38.11261	Longitude	W075.18881
Water Depth (m)			
Handheld GPS used	JCB 76S	GPS Waypoint	028
YSI		Camera	DSLR

  

<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>	<b>Sample Type/Sample</b>	<b>X, Measure, Time</b>
<b>DGPS Positioning</b>		<b>Radio Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A028	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

<b>Surface/Grab</b>	<b>Water Quality Parameters</b>
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

<b>Marsh Push Core: 4" Polycarbonate Barrel</b>	<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>	<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

<b>Notes</b>
toe of o/w fan. sandy w/ sparse veg. @ edge of spartina (?) marsh. DGPS/GPS A029/029 in marsh. SAND Auger recovered peat + then to underlying sand.

  

<b>Photos</b>
DSLR 118-122 site photos + trench 123-126 N → E → S → W from site 127 toe + marsh

Site ID	14CTB - 439		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	OSU	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	12:40	Departure Time (EDT)	
Latitude	N 38.11305	Longitude	W 075.18859
Water Depth (m)			
Handheld GPS used	JCB 76 S	GPS Waypoint	030
YSI		Camera	DSLR

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Roc-A	Start Time	
GPS Session ID	A030	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	15 cm	pH (-)	
Azimuth from GPS	W 275	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gauge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	7 cm
Shear Strength (kg/cm <sup>2</sup> )		Recovered Core Length (cm)	36.5 cm
Barrel Length (cm)		Core Catcher Used?	N/O
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	25 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	W 275
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

  

<b>Notes</b>			
toe of overwash fan adj. to spartina (sp?) marsh. DGPS/GPS A031/031 in marsh ~ 2m from toe of o/w very thick marsh grass/veg. Sand auger punched through peat from 20-24 cm underlying sand.			
<b>Photos</b>			
DSLR - 128-129 site photos 130-133 N → E → S → W from site 134-137 trench 138 to marsh			



Site ID	14CTB - 440		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB + CTW		
Platform	OSV	Location	ASIS, Worcester Co MD
Arrival Time (EDT)	13:40	Departure Time (EDT)	13:47
Latitude	N 38.11267	Longitude	W 075.18997
Water Depth (m)		GPS Waypoint	004
Handheld GPS used	JCB 765	Camera	JCB AL30
YSI			137-141

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue A	Start Time	
GPS Session ID	A004	Stop Time	
Occupation Time (min)	5 mins	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	spartina?	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	1.0m	pH (-)	
Azimuth from GPS	W 250	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	
Shear Strength (kg/cm²)		Recovered Core Length (cm)	
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

<b>Notes</b>			
back-barrier spartina (?) marsh mosquitos!			

<b>Photos</b>			
137-140 N → E → S → W from site			
141 ~ SE Cathryn			

Site ID	14CTB - 442		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/24	Day of Year	297
Field Crew	JCB + MEM		
Platform	USV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	10:36	Departure Time (EDT)	11:08
Latitude	N 38.11142	Longitude	W 075.18816
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	025
YSI		Camera	DSLR

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Rec A	Start Time	
GPS Session ID	A025	Stop Time	
Occupation Time (min)	5 min	Total Volume	
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	SAND + veg	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	==	Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)	11	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	11	DO (mg/L)	
Grain Size	11	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	11	Salinity	
Distance from GPS	20 cm	pH (-)	
Azimuth from GPS	NE 035	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	fn 11
Shear Strength (kg/cm²)		Recovered Core Length (cm)	45 cm
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	35 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	N 010
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

  

<b>Notes</b>			
toe of dwt bay sand + veg (golden rod, scrub) ~ 30m from site 443 in veg. sand auger #1 45 cm all sand, good layering #2 35 cm from trench (60-95 cm depth) dark gray sand at bottom; refusal → overlying organic contact?			
<b>Photos</b>			
DSLR 97 → site photo > from veg line + trench 100-103 N → E → S → W from site.			



<b>Site ID</b>		14CTB - 443	
<b>USGS Field Activity Number (FAN)</b>		2014-322-FA (14CTB02)	
<b>Date</b>	10/21	<b>Day of Year</b>	294
<b>Field Crew</b>	JCB + CJW		
<b>Platform</b>	ASV	<b>Location</b>	ASIS, Worcester Co, MD
<b>Arrival Time (EDT)</b>	13:27	<b>Departure Time (EDT)</b>	
<b>Latitude</b>	N 38.11171	<b>Longitude</b>	W 075.18813
<b>Water Depth (m)</b>	1-2 cm standing		
<b>Handheld GPS used</b>	JCB 765	<b>GPS Waypoint</b>	003
<b>YSI</b>		<b>Camera</b>	JCB A630 132-136

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue	Start Time	
GPS Session ID	10ECA	Stop Time	
Occupation Time (min)	A003	Total Volume	
	5 min		
<b>Surface/Grab</b>		<b>Water Quality Parameters</b>	
Vegetation/Sediment Type	back-dune shrub/scrub	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	50 cm	pH (-)	
Azimuth from GPS	N 000	ORP (mV)	
<b>Marsh Push Core: 4" Polycarbonate Barrel</b>		<b>Sand Gouge Core: AMS Sand/Loose Sediment Probe</b>	
Vegetation Type		Barrel Length (cm)	
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	
Shear Strength (kg/cm²)		Recovered Core Length (cm)	
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			
<b>Marsh Auger Core: Eijkelpamp Peat Sampler</b>		<b>Shovel (Dig) Core: AMS Sharpshooter Shovel</b>	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

  

<b>Notes</b>			
back-dune marsh   shrub   scrub @ edge of ow toe			
<b>Photos</b>			
132-135 N → E → S → W			
136 vegetation			

Site ID	14CTB - 4445		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/21	Day of Year	294
Field Crew	JCB + CJW		
Platform	OSU	Location	ASIS, Worchester Rd, MD
Arrival Time (EDT)	13:50	Departure Time (EDT)	13:57
Latitude	N 38.11312	Longitude	W 075.18916
Water Depth (m)			
Handheld GPS used	JCB 76S	GPS Waypoint	005
YSI		Camera	JCB A330 142-146

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>			
GPS Receiver Used	Blue REC A	<b>Radium Sampling: Mn Fiber</b>	
GPS Session ID	A005	Start Time	
Occupation Time (min)	5 min	Stop Time	
		Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

back-barrier spartina (?) marsh  
behind ow fan / shrub - scrub transition

Photos

142-145 N → E → S → W  
146 marsh veg



Site ID	14CTB - 445		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	04/26/14	Day of Year	299
Field Crew	CW+AME		
Platform	OSV	Location	
Arrival Time (EDT)	157	Departure Time (EDT)	2:03
Latitude	38.24494	Longitude	-75.13608
Water Depth (m)	7cm		
Handheld GPS used	SANFORD 70	GPS Waypoint	117
YSI		Camera	waterproof

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	B7	Start Time	
GPS Session ID	B17	Stop Time	
Occupation Time (min)	5min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGDS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
2.03m → Distance from Sed surface to GPS antenna 10 feet from Juncus (it is South of GPS)

  

Photos
2108-2111 N → E → S → W

Site ID	14CTB - 446		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/22	Day of Year	295
Field Crew	JCB + MEM + AME + CJW		
Platform	OSU	Location	ASIS, Worcester 08, MD
Arrival Time (EDT)	11:55	Departure Time (EDT)	12:25
Latitude	N 38.24467	Longitude	W 075.13550
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	014
YSI		Camera	

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Kec A	Start Time	
GPS Session ID	A014	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

#### Notes

~~at~~ transition from toe of o/w to back barrier marsh  
 spartina + juncus  
 sand - "marsh" contact recovered in sand auger

#### Photos

A630 190-191 SW 230 to toe of o/w deposit  
 192 NE 050 from site back along deposit  
 193 NE 050 from toe  
 194 NNE across marsh from toe



Site ID	14CTB - 447		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/22	Day of Year	295
Field Crew	JCB, MEM, AME, CTJW		
Platform	DSV	Location	ASIS, Worcester CO, MD
Arrival Time (EDT)	10:09	Departure Time (EDT)	10:50
Latitude	N 38.24437	Longitude	W 075.13441
Water Depth (m)		GPS Waypoint	012
Handheld GPS used	JCB 765	Camera	DSLR D5200 + JCB A30

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>			
GPS Receiver Used	Blue Rfc-A	Radium Sampling: Mn Fiber	
GPS Session ID	A012	Start Time	
Occupation Time (min)	5 min	Stop Time	
		Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes
overwash has become significantly vegetated since spring 2014. GPR transects may be difficult

Photos
A630 176-183 panoramic N → E → S from site. dense veg + overwash/hummocky DSLR 0001-0015 trench pix

Site ID	14CTB - <del>043</del> 450		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JCS + MEM		
Platform	GSV	Location	ASIS
Arrival Time (EDT)	14:35	Departure Time (EDT)	15:03
Latitude	N 38.24575	Longitude	W 075.13412
Water Depth (m)			
Handheld GPS used	76S	GPS Waypoint	063
YSI		Camera	DR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Reciever Used	A	Start Time	
GPS Session ID	A063	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (ka/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

<b>Notes</b>			
Sand + sparse veg (panicum? + shrub) (golden rod) SAND Auger 55cm #2 From trench @ 58cm 38cm (58-96cm) no organics			
<b>Photos</b>			
345 site photo 346-349 N → E → S → W from site 350-352 trench			



Site ID	14CTB - 451		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JCB + MEM		
Platform	DSV	Location	ASIS
Arrival Time (EDT)	14:04	Departure Time (EDT)	
Latitude	N 38.24584	Longitude	W 075.13441
Water Depth (m)			
Handheld GPS used	765	GPS Waypoint	062
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A062	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

Sand Auger #1 no org 57 cm  
 (H) 55 cm from 47 cm in trench.  
 (47-102 cm) plugged organics bottom ~4 cm

Photos

337 site photo  
 338-341 N → E → S → W from site  
 342 ~ W along "channel" by 345  
 343-344 trench

Site ID	14CTB - 452		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JCB + MEM		
Platform	DSV	Location	ASIS
Arrival Time (EDT)	10:07	Departure Time (EDT)	
Latitude	N 38.24709	Longitude	W 075.13394
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	055
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue = A	Start Time	
GPS Session ID	A055	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

DGPS A056 off toe in thin strip (10-25m wide alongshore)  
 of marsh  
 site shows lots of horse + deer traffic.

Photos

DSLR 284-285 site photos  
 286-289 N → E → S → W from site  
 290-295 panorama S → W → NW  
 of backbarrier marsh  
 296-299 french



Site ID	14CTB - 453		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JUB + MEM		
Platform	OSV	Location	ASIS
Arrival Time (EDT)	10:52	Departure Time (EDT)	
Latitude	N 38.24697	Longitude	W 75.13349
Water Depth (m)			
Handheld GPS used	JUB 765	GPS Waypoint	057
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A057	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI		DO (mg/L)	
Grain Size		Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	10 cm	pH (-)	
Azimuth from GPS	E080	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gauge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	full
Shear Strength (kg/cm <sup>2</sup> )		Recovered Core Length (cm)	59 cm
Barrel Length (cm)		Core Catcher Used?	NO
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	6 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	E090
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

#### Notes

gradual slope up from site 452/ toe of overwash  
 SAMS Auger #1 59 cm  
 #2 from ~89 cm in trench 59 cm (29-88 cm)  
 recovered org. peaty material below ~79 cm

#### Photos

DSLR 300 site photo  
 301-304 N → E → S → W from site  
 305-306 trench (~30 cm)  
 307-308 oblong

Site ID	14CTB - 454		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JCB + MEM		
Platform	OSV	Location	A515
Arrival Time (EDT)	11:30	Departure Time (EDT)	
Latitude	N 38.24681	Longitude	W 075.13290
Water Depth (m)			
Handheld GPS used	765	GPS Waypoint	058
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A058	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	==	Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)		Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	122	DO (mg/L)	
Grain Size	122	Specific Conductance (mS/cm)	
Stable Isotopes/Metals		Salinity	
Distance from GPS	25 cm	pH (-)	
Azimuth from GPS	N 070	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGDS (bottom of weld = top of barrel) (cm)	11
Shear Strength (kg/cm²)		Recovered Core Length (cm)	52 cm
Barrel Length (cm)		Core Catcher Used?	No
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	35 cm
In-the-Ground Outside Depth to Surface (ITGDS) (cm)		Azimuth from GPS	E 110
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

#### Notes

bare sand in "depression" bet vegetated (panicum?) dunes  
 surface lag has some very coarse + shelly material + wind ripples  
 2 x Sand auger see logbook

#### Photos

309 site photo  
 310-312 surface lag + ripples  
 312 shows transition to finer aeolian trapped against dune veg  
 313-316 N → E → S → W from site  
 317-319 trench



Site ID	14CTB - 458		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCB + MEM		
Platform	DSV	Location	ASS, MD
Arrival Time (EDT)	15:02	Departure Time (EDT)	
Latitude	N 38.24787	Longitude	W 075.13243
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	053
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A053	Stop Time	
Occupation Time (min)	5 MIN	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes
-------

~ Same elev as 466 - ~~no sand auger~~  
 distinctive layer 16-22 cm in trench → sand auger  
 also visible @ same depth in auger; ~35 cm  
 from trench site.

Photos
--------

DSLR 252 to site from veg line ~35m  
 253-256 N → E → S → W from site  
 257 - 273 trench



Site ID	14CTB - 459		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, MD
Arrival Time (EDT)	15:43	Departure Time (EDT)	16:20
Latitude	N 38.24799	Longitude	W 075.13278
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	054
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A054	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	11	Temperature (°C)	
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	11	Barometric Pressure (mm Hg)	
Forams (preserved, x2)	11	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	11	DO (mg/L)	
Grain Size	11	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	11	Salinity	
Distance from GPS	25 cm	pH (-)	
Azimuth from GPS	E 100	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	58 cm
Shear Strength (kg/cm <sup>2</sup> )		Recovered Core Length (cm)	58 cm
Barrel Length (cm)		Core Catcher Used?	No
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	45 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	E 050
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

#### Notes

Brine sand bet sparsely vegetated patches  
 ~ 40 m E of phragmites/woody scrub veg line  
 no water table / g  
 banding evident in core comparable to track

#### Photos

DSCR 274 to site  
 275 - 278 N → E → S → W from site  
 plus trench pix



Site ID	14CTB - 460		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JEB + MEM		
Platform	OSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	09:44	Departure Time (EDT)	
Latitude	N38.24888	Longitude	W075.13227
Water Depth (m)			
Handheld GPS used	JEB 765	GPS Waypoint	043
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	Blue Rec A	Start Time	
GPS Session ID	A043	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

<b>Notes</b>			
<p>SAND w/ very sparse grassy veg bayward of vegetated dunes  Surface is coarser grained than @ other sites, w/ large broken + whole shells  SAND Auger 0-54 cm no org. dark banding below ~30 cm  V. coarse 0~3 cm, #2 from 38 cm depth. 47 cm recovered  38-47 cm not organics, sand w/ dark gray banding</p>			
<b>Photos</b>			
<p>DSLR 192-193 site photo  194-197 N → E → S → W from site  198-200 trench.</p>			

Site ID	14CTB - 1461		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCS + MEM		
Platform	DSV	Location	ASIS, Worcester Co MD
Arrival Time (EDT)	10:21	Departure Time (EDT)	
Latitude	N38.24910	Longitude	W075.13314
Water Depth (m)			
Handheld GPS used	765	GPS Waypoint	044
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A044	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	SAND	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	11	Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)	11	Barometric Pressure (mm Hg)	
Forams (preserved, x2)	11	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	11	DO (mg/L)	
Grain Size	11	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	15 cm	Salinity	
Distance from GPS	15 cm	pH (-)	
Azimuth from GPS	5170	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	
Shear Strength (kg/cm²)		Recovered Core Length (cm)	
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	15 cm
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	5180
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

Notes

wet sand @ "toe" (?) of overwash.  
thin strip of marsh beyond this, 32 ppt salinity, but  
sandy soil w/ standing water - spartina (?) + panicum (?)

Photos

DSLR 201 site photo  
202-203 bay side, berm  
204 S from bay side marsh site is in upper RT corner  
205-208 N → E → S → W 209-210 trench.



Site ID	14CTB - 462 replicate 474		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, Worcester Co, MD
Arrival Time (EDT)	11:12	Departure Time (EDT)	
Latitude	N 38.24953	Longitude	W 075.13293
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	045
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A045	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	SAND Veg	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)		Temperature (°C)	
Shear Strength (kg/cm²) (marsh sites only)		Barometric Pressure (mm Hg)	
Forams (preserved, x2)	✓ x4	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	✓ x2	DO (mg/L)	
Grain Size	✓ x2	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	✓ x2	Salinity	
Distance from GPS	20 cm	pH (-)	
Azimuth from GPS	N 035°	ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	24"
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	Full
Shear Strength (kg/cm²)		Recovered Core Length (cm)	50 cm
Barrel Length (cm)		Core Catcher Used?	No
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

Notes

Sand + thin veg (panicum?) on slope from higher marsh to bayside "marsh"  
SAND auger organics ~29 cm

Photos

211-212 site photos looking bayward  
213 from bayside "marsh"  
214-217 N → E → S → W from site  
218 veg adjacent to site 219 marsh veg  
220-224 trench photos

Site ID	14CTB - <u>B63</u>		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	<u>10/25</u>	Day of Year	<u>298</u>
Field Crew	<u>JCB + MEM</u>		
Platform	<u>DSV</u>	Location	<u>ASIS, Worcester Co MD</u>
Arrival Time (EDT)	<u>11:55</u>	Departure Time (EDT)	
Latitude	<u>N 38.25005</u>	Longitude	<u>W 075.13259</u>
Water Depth (m)			
Handheld GPS used	<u>JCB 765</u>	GPS Waypoint	<u>048</u>
YSI		Camera	<u>DSLR</u>

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	<u>A</u>	Start Time	
GPS Session ID	<u>A048</u>	Stop Time	
Occupation Time (min)	<u>5 min</u>	Total Volume	

Surface/Grab		Water Quality Parameters	
Vegetation/Sediment Type	<u>SAND</u>	Water Type (estuary, marsh, standing, marsh backfill)	
Pentrometer (marsh sites only)	<u>11</u>	Temperature (°C)	
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	<u>11</u>	Barometric Pressure (mm Hg)	
Forams (preserved, x2)	<u>11</u>	Dissolved Oxygen (DO) (%)	
Bulk Density/LOI	<u>11</u>	DO (mg/L)	
Grain Size	<u>25 cm</u>	Specific Conductance (mS/cm)	
Stable Isotopes/Metals	<u>NW 330</u>	Salinity	
Distance from GPS		pH (-)	
Azimuth from GPS		ORP (mV)	

Marsh Push Core: 4" Polycarbonate Barrel		Sand Gouge Core: AMS Sand/Loose Sediment Probe	
Vegetation Type		Barrel Length (cm)	
Pentrometer		ITGODS (bottom of weld = top of barrel) (cm)	
Shear Strength (kg/cm <sup>2</sup> )		Recovered Core Length (cm)	
Barrel Length (cm)		Core Catcher Used?	
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)		Distance from GPS	
In-the-Ground Outside Depth to Surface (ITGODS) (cm)		Azimuth from GPS	
Compaction (cm)			
Recovered Core Length (cm)			
Distance from GPS			
Azimuth from GPS			

5x full pen no recovery

Marsh Auger Core: Eijkelpamp Peat Sampler		Shovel (Dig) Core: AMS Sharpshooter Shovel	
Number of Sections		Recovered Depth (cm)	
Total Core Length (cm)		Distance from GPS	
Distance from GPS		Azimuth from GPS	
Azimuth from GPS			

#### Notes

toe/edge of overwash juncus marsh + woody scrub trees ~25-35 m to N w/ significant drop from o/w edge  
 DGPS A049 from juncus

#### Photos

225 to site + bay from overwash  
 226-229 N → E → S → W from site



Site ID	14CTB - 464		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS
Arrival Time (EDT)	12:38	Departure Time (EDT)	13:10
Latitude	N 38 24977	Longitude	W 075 13205
Water Depth (m)			
Handheld GPS used	765	GPS Waypoint	OSO
YSI		Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used		Start Time	
GPS Session ID		Stop Time	
Occupation Time (min)		Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (ka/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGDS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGDS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

target is on elevated dune; relocated to lower elevation to try to get good penetration  
 SAND + dune grass (panicum?)  
 SAND Auger 0-49cm barrel, no org.  
 #2 35cm from trench @ 53cm (53-88cm) No organics

Photos

234 site photo 235 to target on dune.  
 236-239 N → E → S → W From site  
 240-242 trench

Site ID	14CTB - 8465		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS Worcester Co MD
Arrival Time (EDT)	13:19	Departure Time (EDT)	
Latitude	N 38 24938	Longitude	W 075 13249
Water Depth (m)		GPS Waypoint	051
Handheld GPS used	JCB 76 S	Camera	DSLR
YSI			

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A051	Stop Time	
Occupation Time (min)	5 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm <sup>2</sup> ) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGDS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm <sup>2</sup> )	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGDS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

#### Notes

on old fan. sparse veg panicle? + golden rod. (+ sand burrs)  
 SAND Auger 0-51 no org.  
 #2 from trench 39 cm w/ banding including  
 prominent dk layer from ~ 25-28 cm  
 (35-74 cm depth)

#### Photos

DSLR 243 to site  
 244-247 N → E → S → W from site  
 248-254 trench + coring



Site ID	14CTB - 466		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/25	Day of Year	298
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS, MD
Arrival Time (EDT)	14:38	Departure Time (EDT)	
Latitude	N 38.24921	Longitude	W 075.13173
Water Depth (m)			
Handheld GPS used	JCB 765	GPS Waypoint	052
YSI		Camera	DSLR

  

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
<b>DGPS Positioning</b>		<b>Radium Sampling: Mn Fiber</b>	
GPS Receiver Used	A	Start Time	
GPS Session ID	A052	Stop Time	
Occupation Time (min)	5 min	Total Volume	

  

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

  

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gouge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld = top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

  

Marsh Auger Core: Eijkamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

  

Notes
SAND + sparse veg no sand auger

  

Photos
DSLR 255 to site 256-259 N → E → S → W from site 260-261 trench

Site ID	14CTB - 395 MARSH = 476		
USGS Field Activity Number (FAN)	2014-322-FA (14CTB02)		
Date	10/26	Day of Year	299
Field Crew	JCB + MEM		
Platform	OSV	Location	ASIS
Arrival Time (EDT)	16:14	Departure Time (EDT)	
Latitude	N38.24598	Longitude	W075.13522
Water Depth (m)	3-5 cm		
Handheld GPS used	765	GPS Waypoint	064
YSI	proplus	Camera	DSLR

Sample Type/Sample	X, Measure, Time	Sample Type/Sample	X, Measure, Time
DGPS Positioning		Radium Sampling: Mn Fiber	
GPS Receiver Used	Static	Start Time	
GPS Session ID	A064	Stop Time	
Occupation Time (min)	min 30 min	Total Volume	

Surface/Grab	Water Quality Parameters
Vegetation/Sediment Type	Water Type (estuary, marsh, standing, marsh backfill)
Pentrometer (marsh sites only)	Temperature (°C)
Shear Strength (kg/cm²) (marsh sites only)	Barometric Pressure (mm Hg)
Forams (preserved, x2)	Dissolved Oxygen (DO) (%)
Bulk Density/LOI	DO (mg/L)
Grain Size	Specific Conductance (mS/cm)
Stable Isotopes/Metals	Salinity
Distance from GPS	pH (-)
Azimuth from GPS	ORP (mV)

Marsh Push Core: 4" Polycarbonate Barrel	Sand Gauge Core: AMS Sand/Loose Sediment Probe
Vegetation Type	Barrel Length (cm)
Pentrometer	ITGODS (bottom of weld - top of barrel) (cm)
Shear Strength (kg/cm²)	Recovered Core Length (cm)
Barrel Length (cm)	Core Catcher Used?
In-the-Ground Inside Depth to Surface (ITGIDS) (cm)	Distance from GPS
In-the-Ground Outside Depth to Surface (ITGODS) (cm)	Azimuth from GPS
Compaction (cm)	
Recovered Core Length (cm)	
Distance from GPS	
Azimuth from GPS	

Marsh Auger Core: Eijkelpamp Peat Sampler	Shovel (Dig) Core: AMS Sharpshooter Shovel
Number of Sections	Recovered Depth (cm)
Total Core Length (cm)	Distance from GPS
Distance from GPS	Azimuth from GPS
Azimuth from GPS	

Notes

Surface sed samples from below ~4 cm algae growth  
 from standing water "hole" in veg growth  
 \* Shear vane set @ 265 numbers flashed ~11.9, 14.5, 17.5  
 on 3 tries  
 peat auger \* see log book \*

Photos

DSLR 353-357 peat auger  
 tried marsh core 3x zero recovery -  
 cannot plug sand + loose root mat is not  
 cohesive enough  
 Saw w/ shovel core - how to get + recover in uncom solid  
 roots + muck?